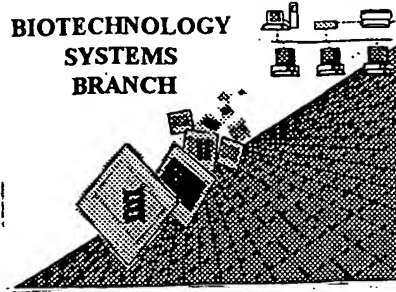


0590
0103

BIOTECHNOLOGY
SYSTEMS
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RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 16/014,485
Source: PIPE
Date Processed by STIC: 1/4/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

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- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE: SEE BELOW FOR ADDRESS:

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Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom, including:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)

2. U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202

3. Hand Carry directly to:

U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202

Or

U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

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OIPE

RAW SEQUENCE LISTING

DATE: 01/04/2002

PATENT APPLICATION: US/10/014,485

TIME: 10:08:54

Input Set : A:\ES.txt

Output Set: N:\CRF3\01042002\J014485.raw

pp. 5-6

**Does Not Comply
Corrected Diskette Needed**

7 <110> APPLICANT: Cell Signaling Technology, Inc.
 10 COMB, Michael J.
 13 ZHANG, Hui
 16 TAN, Yi
 22 <120> TITLE OF INVENTION: PRODUCTION OF MOTIF-SPECIFIC AND CONTEXT-INDEPENDENT
 23 ANTIBODIES USING PEPTIDE LIBRARIES AS ANTIGENS
 29 <130> FILE REFERENCE: CST-138 CIP2
 35 <140> CURRENT APPLICATION NUMBER: US/10/014,485
 35 <141> CURRENT FILING DATE: 2001-11-13
 35 <150> PRIOR APPLICATION NUMBER: US 09/148,712
 38 <151> PRIOR FILING DATE: 1998-09-04
 44 <150> PRIOR APPLICATION NUMBER: US 09/535,364
 47 <151> PRIOR FILING DATE: 2000-03-24
 53 <160> NUMBER OF SEQ ID NOS: 145
 59 <170> SOFTWARE: PatentIn version 3.1
 65 <210> SEQ ID NO: 1
 68 <211> LENGTH: 14
 71 <212> TYPE: PRT
 74 <213> ORGANISM: Homo sapiens
 80 <220> FEATURE:
 83 <221> NAME/KEY: MOD_RES
 86 <222> LOCATION: (9)..(9)
 89 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 9 is phosphorylated
 96 <400> SEQUENCE: 1
 100 Ile Lys Asp Gly Ala Thr Met Lys Thr Phe Cys Gly Thr Pro
 102 1 5 10
 108 <210> SEQ ID NO: 2
 111 <211> LENGTH: 14
 114 <212> TYPE: PRT
 117 <213> ORGANISM: Homo sapiens
 123 <220> FEATURE:
 126 <221> NAME/KEY: MOD_RES
 129 <222> LOCATION: (5)..(5)
 132 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
 139 <400> SEQUENCE: 2
 143 Asp Ala Ala Val Thr Pro Lys Lys Arg His Leu Ser Lys Cys
 145 1 5 10
 151 <210> SEQ ID NO: 3
 154 <211> LENGTH: 15
 157 <212> TYPE: PRT
 160 <213> ORGANISM: Homo sapiens
 166 <220> FEATURE:
 169 <221> NAME/KEY: MOD_RES
 172 <222> LOCATION: (8)..(8)
 175 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 8 is phosphorylated
 182 <400> SEQUENCE: 3
 186 Asp Thr Gln Ile Lys Arg Asn Thr Phe Val Gly Thr Pro Phe Cys

RAW SEQUENCE LISTING

DATE: 01/04/2002

PATENT APPLICATION: US/10/014,485

TIME: 10:08:54

Input Set : A:\ES.txt

Output Set: N:\CRF3\01042002\J014485.raw

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188 1          5          10          15
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203 <213> ORGANISM: Homo sapiens
209 <220> FEATURE:
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215 <222> LOCATION: (5)..(5)
218 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
225 <400> SEQUENCE: 4
229 His Gln Val Val Thr Arg Trp Tyr Arg Cys
231 1          5          10
237 <210> SEQ ID NO: 5
240 <211> LENGTH: 10
243 <212> TYPE: PRT
246 <213> ORGANISM: Homo sapiens
252 <220> FEATURE:
255 <221> NAME/KEY: MOD_RES
258 <222> LOCATION: (7)..(7)
261 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 7 is phosphorylated
268 <400> SEQUENCE: 5
272 His Gln Val Leu Met Lys Thr Val Cys Gly
274 1          5          10
280 <210> SEQ ID NO: 6
283 <211> LENGTH: 14
286 <212> TYPE: PRT
289 <213> ORGANISM: Homo sapiens
295 <220> FEATURE:
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301 <222> LOCATION: (7)..(7)
304 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 7 is phosphorylated
311 <400> SEQUENCE: 6
315 Ile Pro Ile Arg Val Tyr Thr His Glu Val Val Thr Leu Cys
317 1          5          10
323 <210> SEQ ID NO: 7
326 <211> LENGTH: 15
329 <212> TYPE: PRT
332 <213> ORGANISM: Homo sapiens
338 <220> FEATURE:
341 <221> NAME/KEY: MOD_RES
344 <222> LOCATION: (8)..(8)
347 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 8 is phosphorylated
354 <400> SEQUENCE: 7
358 Gly Val Pro Val Arg Thr Tyr Thr His Glu Val Val Thr Leu Cys
360 1          5          10          15
366 <210> SEQ ID NO: 8
369 <211> LENGTH: 15
372 <212> TYPE: PRT
375 <213> ORGANISM: Homo sapiens

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RAW SEQUENCE LISTING

DATE: 01/04/2002

PATENT APPLICATION: US/10/014,485

TIME: 10:08:54

Input Set : A:\ES.txt

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381 <220> FEATURE:
384 <221> NAME/KEY: MOD_RES
387 <222> LOCATION: (8)..(8)
390 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 8 is phosphorylated
397 <400> SEQUENCE: 8
401 Asn Gln Val Phe Leu Gly Phe Thr Tyr Val Ala Pro Lys Lys Cys
403 1          5          10          15
409 <210> SEQ ID NO: 9
412 <211> LENGTH: 14
415 <212> TYPE: PRT
418 <213> ORGANISM: Homo sapiens
424 <220> FEATURE:
427 <221> NAME/KEY: MOD_RES
430 <222> LOCATION: (12)..(12)
433 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 12 is phosphorylated
440 <400> SEQUENCE: 9
444 Lys Glu His Met Met Asp Gly Val Thr Thr Arg Thr Phe Cys
446 1          5          10
452 <210> SEQ ID NO: 10
455 <211> LENGTH: 15
458 <212> TYPE: PRT
461 <213> ORGANISM: Homo sapiens
467 <220> FEATURE:
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473 <222> LOCATION: (7)..(7)
476 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 7 is phosphorylated
483 <220> FEATURE:
486 <221> NAME/KEY: MOD_RES
489 <222> LOCATION: (9)..(9)
492 <223> OTHER INFORMATION: PHOSPHORYLATION; tyrosine at position 9 is phosphorylated
499 <400> SEQUENCE: 10
503 Asp His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Cys
505 1          5          10          15
511 <210> SEQ ID NO: 11
514 <211> LENGTH: 15
517 <212> TYPE: PRT
520 <213> ORGANISM: Homo sapiens
526 <220> FEATURE:
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532 <222> LOCATION: (5)..(5)
535 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
542 <220> FEATURE:
545 <221> NAME/KEY: MOD_RES
548 <222> LOCATION: (9)..(9)
551 <223> OTHER INFORMATION: PHOSPHORYLATION; serine at position 9 is phosphorylated
558 <400> SEQUENCE: 11
562 Glu Leu Leu Pro Thr Pro Pro Leu Ser Pro Ser Arg Arg Ser Cys
564 1          5          10          15
570 <210> SEQ ID NO: 12

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Input Set : A:\ES.txt

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573 <211> LENGTH: 17
576 <212> TYPE: PRT
579 <213> ORGANISM: Homo sapiens
585 <220> FEATURE:
588 <221> NAME/KEY: MOD_RES
591 <222> LOCATION: (10)..(10)
594 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 10 is phosphorylated
601 <220> FEATURE:
604 <221> NAME/KEY: MOD_RES
607 <222> LOCATION: (12)..(12)
610 <223> OTHER INFORMATION: PHOSPHORYLATION; tyrosine at position 12 is phosphorylated
617 <400> SEQUENCE: 12
621 Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val Ala Thr Arg
623 1          5          10          15
629 Cys
637 <210> SEQ ID NO: 13
640 <211> LENGTH: 15
643 <212> TYPE: PRT
646 <213> ORGANISM: Homo sapiens
652 <220> FEATURE:
655 <221> NAME/KEY: MOD_RES
658 <222> LOCATION: (5)..(5)
661 <223> OTHER INFORMATION: PHOSPHORYLATION; threonine at position 5 is phosphorylated
668 <220> FEATURE:
671 <221> NAME/KEY: MOD_RES
674 <222> LOCATION: (7)..(7)
677 <223> OTHER INFORMATION: PHOSPHORYLATION; tyrosine at position 7 is phosphorylated
684 <400> SEQUENCE: 13
688 Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Cys
690 1          5          10          15
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699 <211> LENGTH: 14
702 <212> TYPE: PRT
705 <213> ORGANISM: Homo sapiens
711 <220> FEATURE:
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717 <222> LOCATION: (8)..(8)
720 <223> OTHER INFORMATION: Xaa at position 8 is phosphoserine or phosphothreonine
727 <220> FEATURE:
730 <221> NAME/KEY: MISC_FEATURE
733 <222> LOCATION: (11)..(11)
736 <223> OTHER INFORMATION: Xaa at position 11 is arginine or lysine
743 <220> FEATURE:
746 <221> NAME/KEY: MISC_FEATURE
749 <222> LOCATION: (1)..(14)
752 <223> OTHER INFORMATION: Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20
amino
754          acids except cysteine
761 <400> SEQUENCE: 14
OK> 765 Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa

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RAW SEQUENCE LISTING

DATE: 01/04/2002

PATENT APPLICATION: US/10/014,485

TIME: 10:08:54

Input Set : A:\ES.txt

Output Set: N:\CRF3\01042002\J014485.raw

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767 1          5          10
773 <210> SEQ ID NO: 15
776 <211> LENGTH: 14
779 <212> TYPE: PRT
782 <213> ORGANISM: Homo sapiens
788 <220> FEATURE:
791 <221> NAME/KEY: MOD_RES
794 <222> LOCATION: (8)..(8)
797 <223> OTHER INFORMATION: PHOSPHORYLATION; serine at position 8 is phosphorylated
804 <220> FEATURE:
807 <221> NAME/KEY: MISC_FEATURE
810 <222> LOCATION: (1)..(14)
813 <223> OTHER INFORMATION: Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20
amino a
815      cids except cysteine
822 <400> SEQUENCE: 15
W 826 Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
828 1          5          10
834 <210> SEQ ID NO: 16
837 <211> LENGTH: 14
840 <212> TYPE: PRT
843 <213> ORGANISM: Homo sapiens
849 <220> FEATURE:
852 <221> NAME/KEY: MISC_FEATURE
855 <222> LOCATION: (1)..(14)
858 <223> OTHER INFORMATION: Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20
amino a
860      cids except cysteine
867 <400> SEQUENCE: 16
W 871 Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
873 1          5          10
879 <210> SEQ ID NO: 17
882 <211> LENGTH: 14
885 <212> TYPE: PRT
888 <213> ORGANISM: Homo sapiens
894 <220> FEATURE:
897 <221> NAME/KEY: MISC_FEATURE
900 <222> LOCATION: (8)..(8)
903 <223> OTHER INFORMATION: Xaa at position 8 is phosphoserine or phosphothreonine
910 <220> FEATURE:
913 <221> NAME/KEY: MISC_FEATURE
916 <222> LOCATION: (1)..(14)
919 <223> OTHER INFORMATION: Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino
acid
921      s except cysteine
928 <400> SEQUENCE: 17
W 932 Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
934 1          5          10
940 <210> SEQ ID NO: 18
943 <211> LENGTH: 14
946 <212> TYPE: PRT
949 <213> ORGANISM: Homo sapiens

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Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

<210> 88

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (2)..(15)

<223> At ^{positions} positions 2-4, 6, 9, and 13-15, X = any amino acid except C and W; At position 8, X = any amino acid except C and W and is biased 50% to T; At position 11, X = any amino acid except C and W and is biased 50% to F; At position 12, X = any amino acid except C and W and is biased 50% to G.

←
← delete
← blank
← lines

Per 1.823 of Sequence Rules, 4 lines MAXIMUM for <223> response. If more lines are needed, insert another <2207 and insert a <2237 line (with response) under <2207.

→ The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/014,485

DATE: 01/04/2002

TIME: 10:08:55

Input Set : A:\ES.txt

Output Set: N:\CRF3\01042002\J014485.raw

L:35 M:270 C: Current Application Number differs, Replaced Current Application No
 L:35 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
 L:826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
 L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
 L:932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
 L:993 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
 L:1070 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
 L:1147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:1224 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
 L:1301 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
 L:1378 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
 L:1455 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
 L:1532 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
 L:1593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
 L:1654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
 L:1715 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
 L:1792 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
 L:1982 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
 L:2027 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34
 L:2298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
 L:2375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
 L:2506 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
 L:2567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
 L:2644 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47
 L:4420 M:259 W: Allowed number of lines exceeded, <223> Other Information:
 L:4431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88
 L:4494 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89
 L:4555 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90
 L:4616 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91
 L:4677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92
 L:4738 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
 L:4797 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94
 L:4856 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95
 L:4912 M:259 W: Allowed number of lines exceeded, <223> Other Information:
 L:4945 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
 L:4953 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
 L:5012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97
 L:5077 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98
 L:5136 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99
 L:5201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:100
 L:5257 M:259 W: Allowed number of lines exceeded, <223> Other Information:
 L:5268 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
 L:5327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
 L:5390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103
 L:5449 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104
 L:5505 M:259 W: Allowed number of lines exceeded, <223> Other Information:
 L:5534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/014,485

DATE: 01/04/2002

TIME: 10:08:55

Input Set : A:\ES.txt

Output Set: N:\CRF3\01042002\J014485.raw

L:5593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:5656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107
L:5715 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108
L:5771 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:5782 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109
L:5857 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110
L:5929 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:5940 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111
L:5948 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111
L:6007 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112